

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

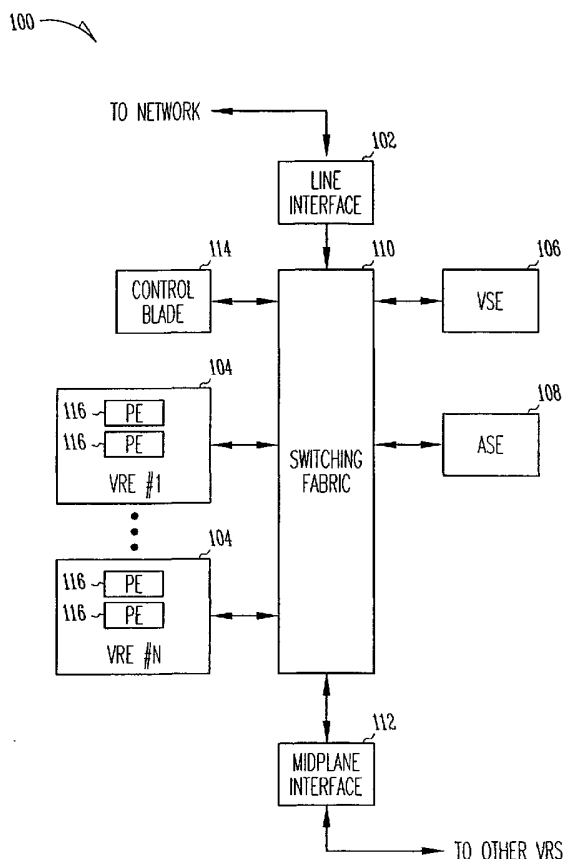
PCT

(10) International Publication Number
WO 2004/021652 A3

- (51) International Patent Classification⁷: H04L 12/56, 29/14 94002 (US). AARONSON, Itai; 2328 Wooster Avenue, Belmont, CA 94002 (US).
- (21) International Application Number: PCT/US2003/027222 (74) Agents: STEFFEY, Charles E. et al.; P.O. Box 2938, Minneapolis, MN 55402 (US).
- (22) International Filing Date: 29 August 2003 (29.08.2003) (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 10/232,979 29 August 2002 (29.08.2002) US (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant: COSINE COMMUNICATIONS, INC. [US/US]; 1200 Bridge Parkway, Redwood City, CA 94065 (US).
- (72) Inventors: TALAUGON, Wilson; 35429 Monterra Circle, Union City, CA 94587 (US). SUBRAMANIAM, Sridhar; 20800 Homestead Road, #18G, Cupertino, CA 95014 (US). CHIN, Bill; 1800 Chula Vista Drive, Belmont, CA

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR VIRTUAL ROUTER FAILOVER IN A NETWORK ROUTING SYSTEM



(57) Abstract: In a network routing system, a control blade provides for redundancy and failover of virtual routers (VRs) instantiated by objects running on processing engines of the several virtual routing engines (VREs). When the control blade detects a failure of one processing engines, it may identify the virtual private networks (VPNs) and/or VRs operating on the failed processing engine. The control blade identifies a set of command lines corresponding with the identified VPNs and VRs, and replays the set of command lines with an identity of a new processing engine to recreate the identified VPNs and VRs on the new processing engine.

WO 2004/021652 A3



Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

22 April 2004

INTERNATIONAL SEARCH REPORT

Internatic Application No
PCT/us 03/27222

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/56 H04L29/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, IBM-TDB, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 51290 A (ALCATEL INTERNETWORKING INC) 31 August 2000 (2000-08-31) page 2, line 25 -page 3, line 2 page 10, line 3 - line 22 page 27, line 1-21	1-25
A	US 2002/097672 A1 (BARBAS STEVE N ET AL) 25 July 2002 (2002-07-25) paragraph '0024! - paragraph '0026!	1-25

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

2 March 2004

Date of mailing of the international search report

15/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Hardelin, T

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internatic	pplication No
PCT/US 03/27222	

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0051290	A	31-08-2000	
		AU 4004000 A	14-09-2000
		CN 1341313 T	20-03-2002
		EP 1171976 A2	16-01-2002
		EP 1225725 A2	24-07-2002
		EP 1225731 A2	24-07-2002
		EP 1225726 A2	24-07-2002
		EP 1225727 A2	24-07-2002
		EP 1225728 A2	24-07-2002
		EP 1225729 A2	24-07-2002
		EP 1225730 A2	24-07-2002
		JP 2003524930 T	19-08-2003
		WO 0051290 A2	31-08-2000
		US 6674756 B1	06-01-2004
		AU 4003700 A	14-09-2000
US 2002097672	A1	25-07-2002	
		US 2002099972 A1	25-07-2002